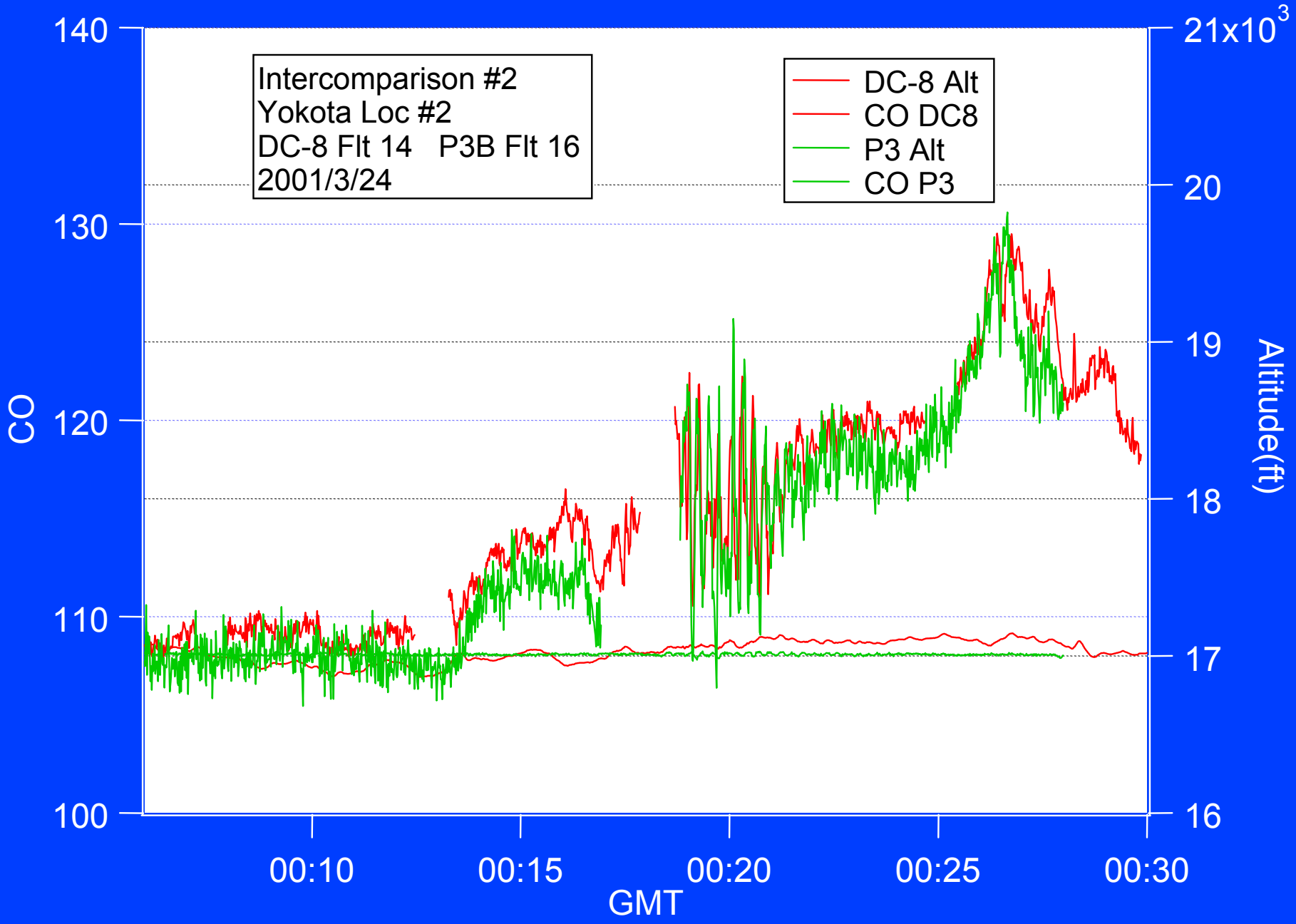
CO Data Status

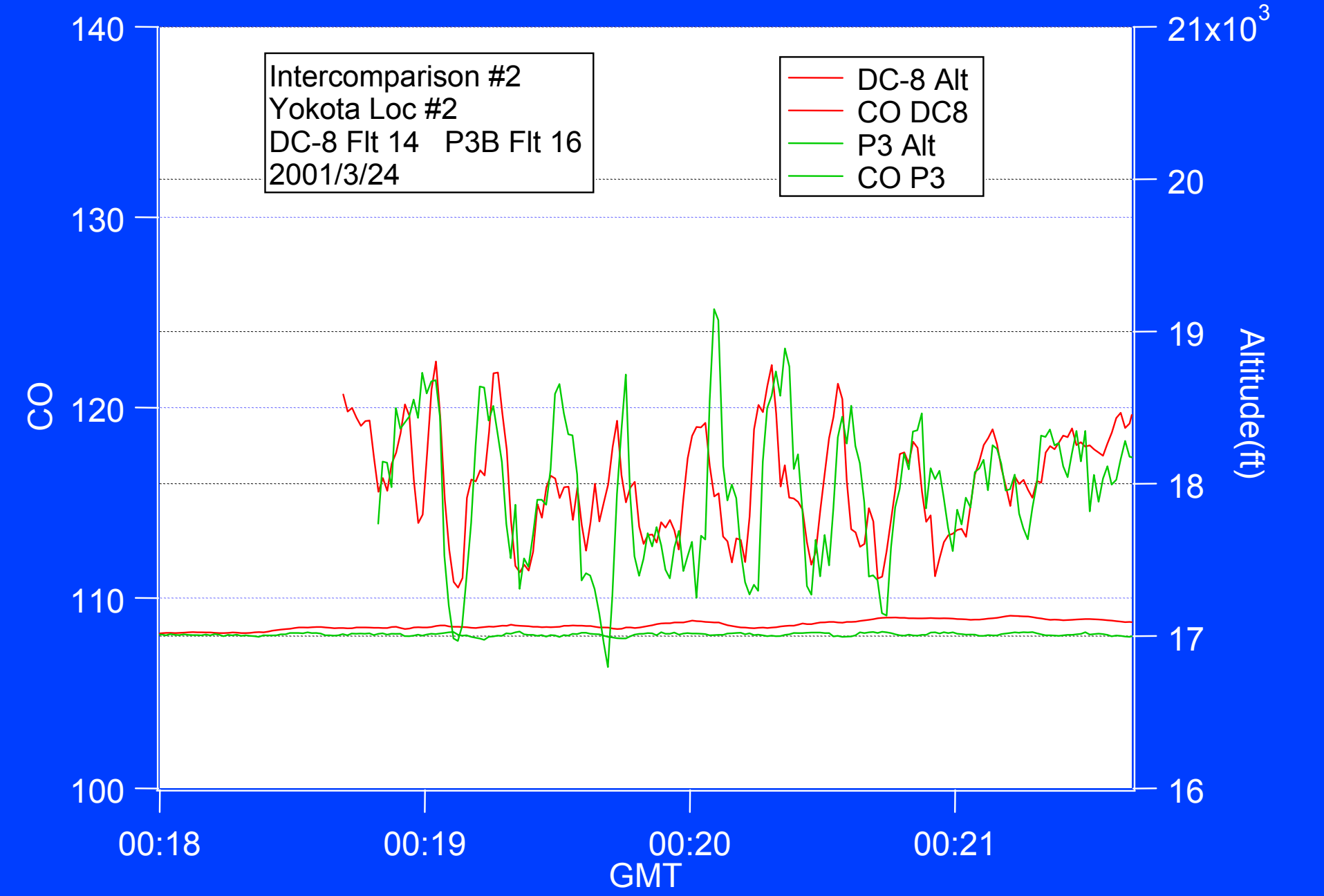
	P-3	DC-8
Data:	**All flights**	**All flights**
Precision (1 sigma):	**1%**	**1%**
Data Rate:	**1 sec.**	**1 sec.**
Comments:		**A few saturated peaks**

Accuracy: Dependent on NOAA/CMDL standards.

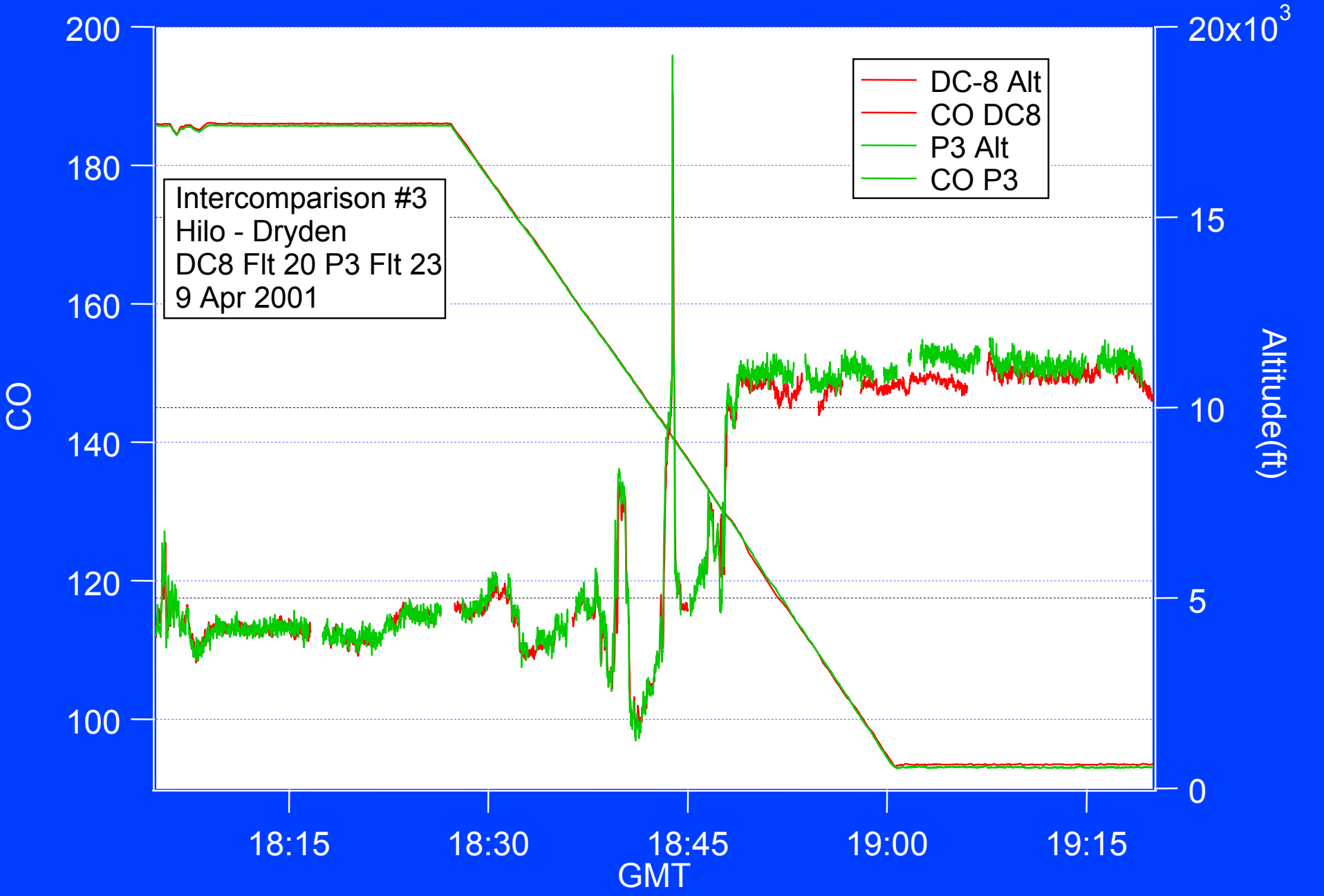
TRACE-P CO Intercomparison #2



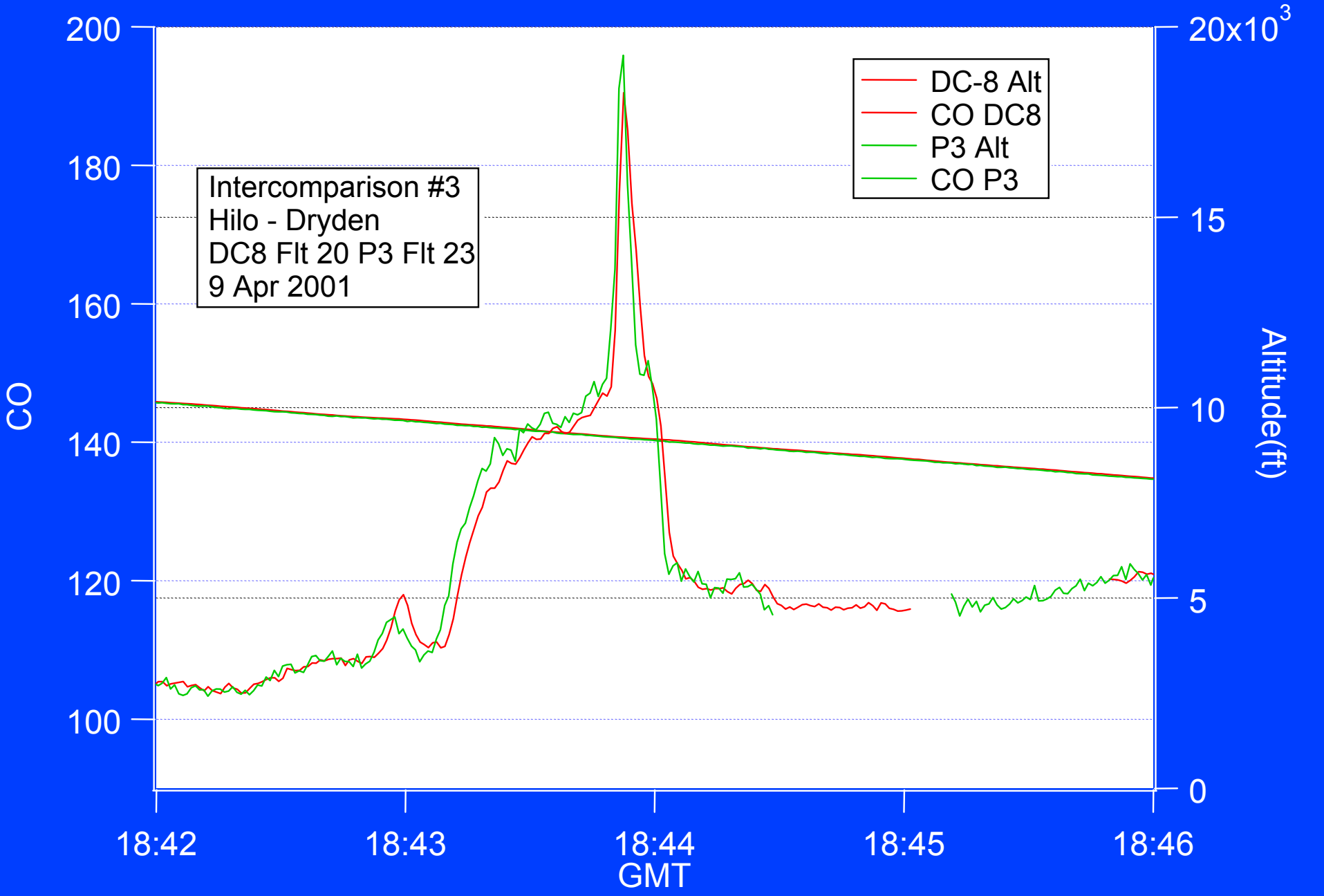
TRACE-P CO Intercomparison #2



TRACE-P CO Intercomparison #3



TRACE-P CO Intercomparison #3



NOAA/CMDL CO Scale Change

- *NOAA/CMDL recently reported drifts in their CO working standards over the past decade*
- *Implications on DACOM CO for GTE missions*

  PEM-West A and before – no change

  PEM-West B – increase CO 0.9 to 1.3%

  PEM-Tropics A – increase CO 4.4 to 14.2%

  PEM-Tropics B – increase CO 11.1 to 14.6%

  TRACE-P – no change

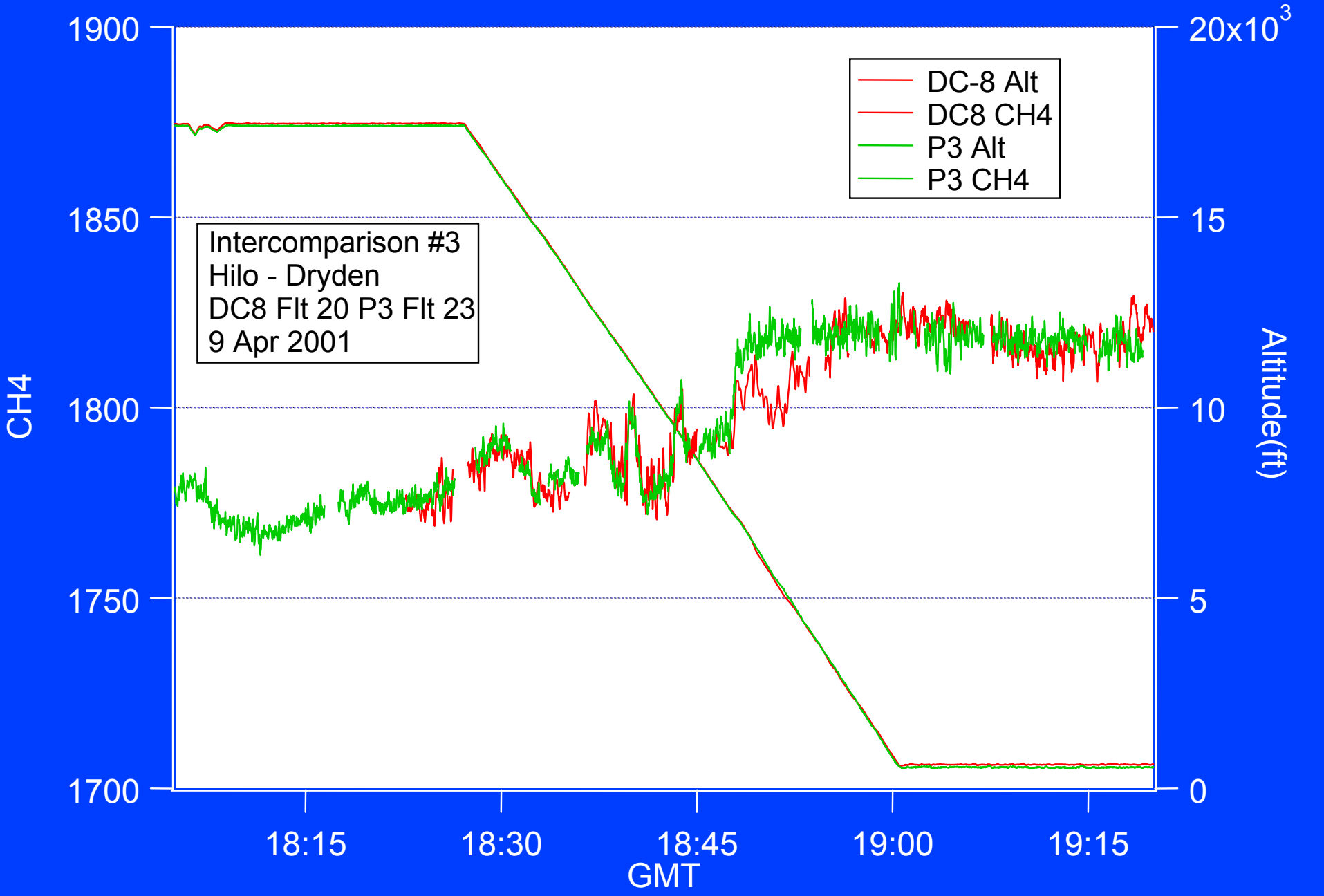
CH_4 Data Status

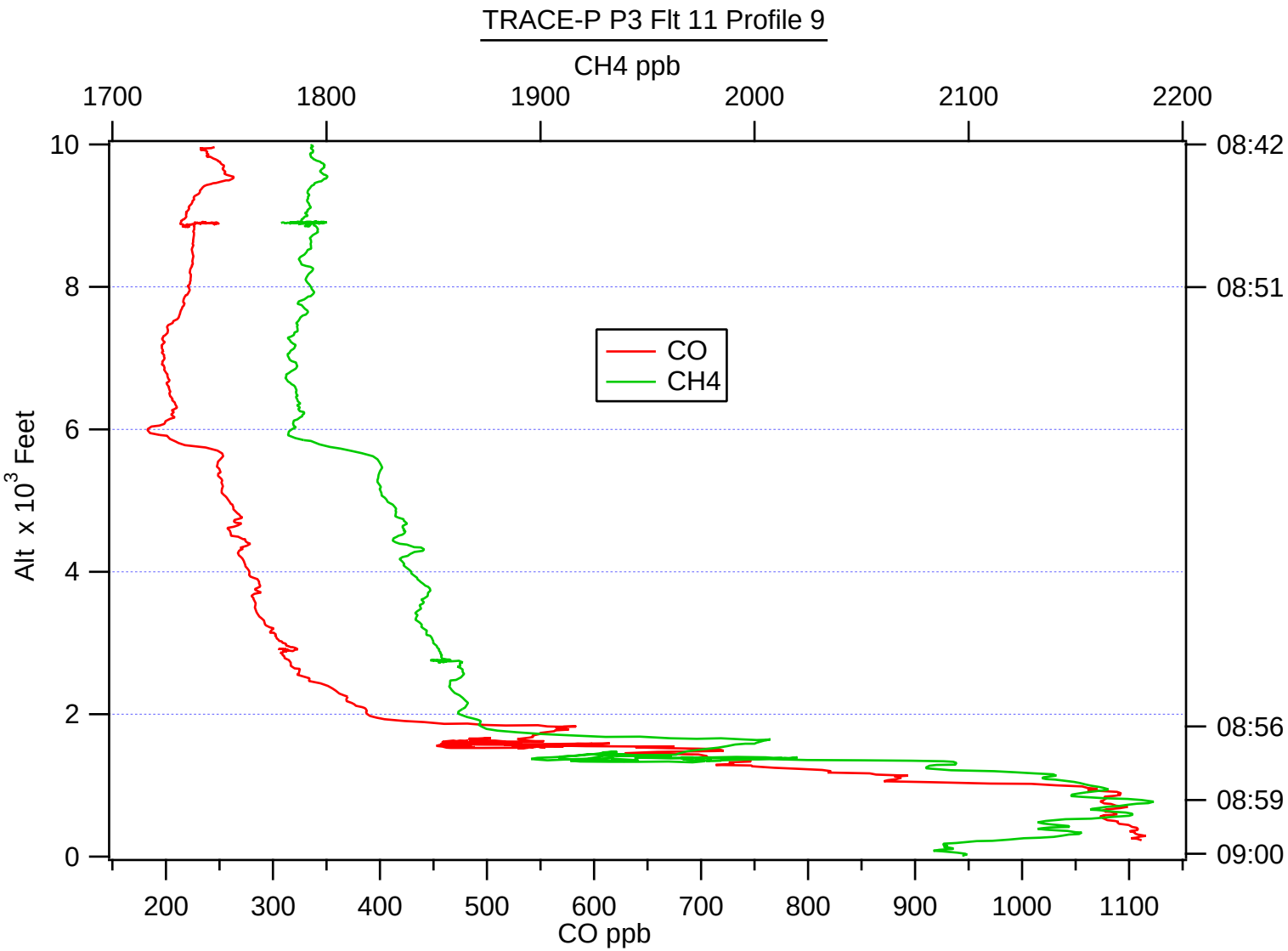
	P-3	DC-8
Data:	**All flights except #13**	**So-so: #6,7, 8 OK/good: #9 to 20**
Precision (1 σ):	**< 0.2%**	**0.2%**
Data Rate:	**5 sec.**	**5 sec.**

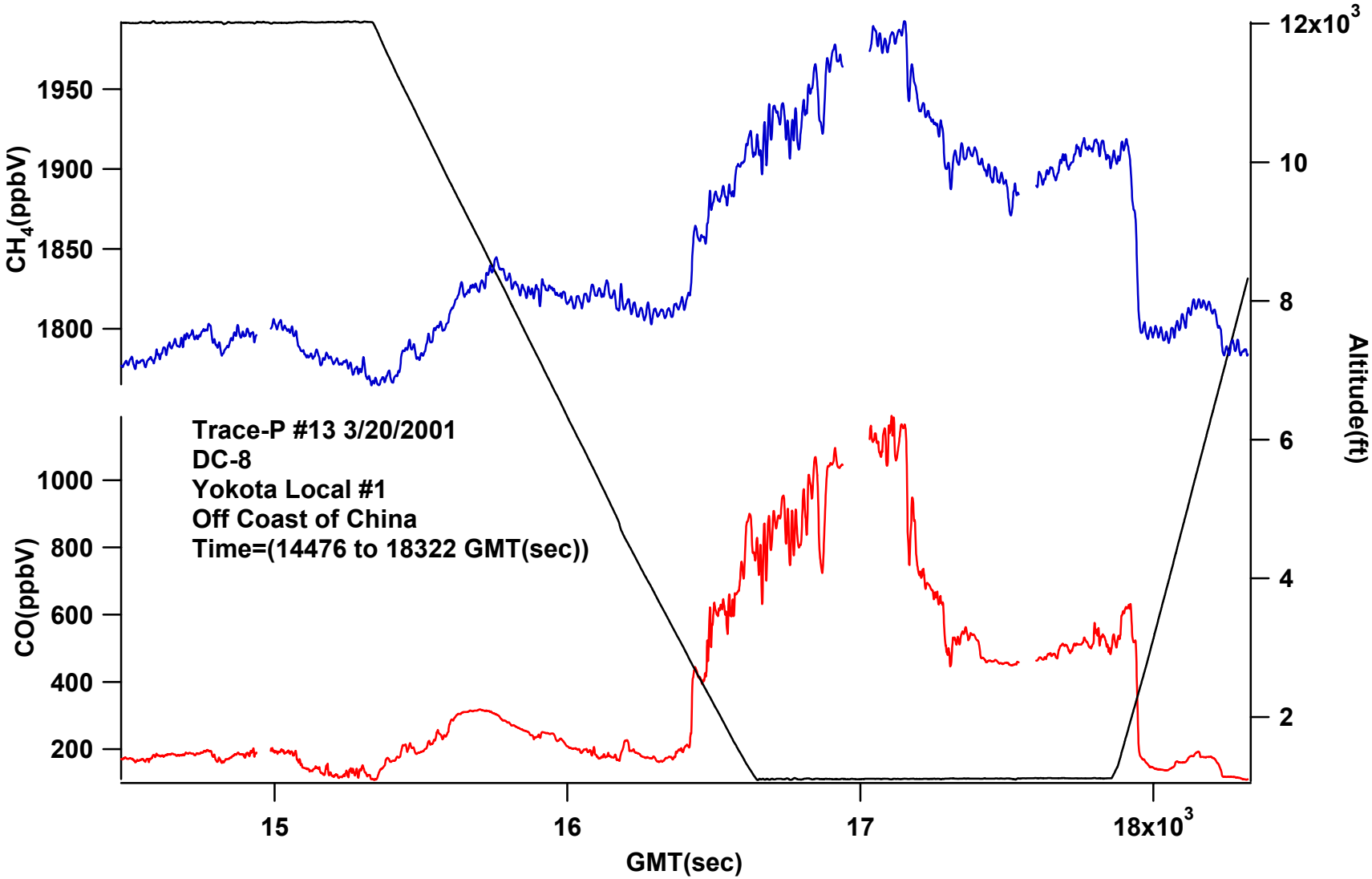
Comments: **CH_4 lasers failed before TRACE-P. Resulted in new lasers; new wavelength region; new optics; new problems;poor performance on DC-8 during early flights.**

Accuracy: **DACOM tied to NOAA/CMDL calib. while UC Irvine tied to NIST calib. Offset by <1%**

TRACE-P CH4 Intercomparison #3




TRACE-P P3 Flt 11 Profile 9
CH4 ppb
1700
1800
1900
2000
2100
2200
10
8
6
4
2
0
08:42
08:51
08:56
08:59
09:00
CO
CH4
Alt x 10^3 Feet
200
300
400
500
600
700
800
900
1000
1100
CO ppb


Trace-P #13 3/20/2001
DC-8
Yokota Local #1
Off Coast of China
Time=(14476 to 18322 GMT(sec))
CH4(ppbV)
1950
1900
1850
1800
CO(ppbV)
1000
800
600
400
200
12x10^3
10
8
6
4
2
Altitude(ft)
15
16
17
18x10^3
GMT(sec)

N_2O Data Status

Data:	**Not available Flts #11 –13**
Precision (1 σ):	**~0.2%**
Data Rate:	**1 sec.**
Comments:	**Precision degraded by change of optics to accommodate new CH4 lasers. Precision good for strat. air observed on Flts#17, 18, 20 but poor for trop. air.**
Accuracy:	**1% (NOAA/CMDL standards)**

$H_2O(v)$ Data Status

Data:	**All DC-8 flights**
Precision (1 σ):	**<1%**
Data Rate:	**20/sec. (bandwidth ~7Hz)**
Accuracy:	**10%**
Comments:	**TRACE-P $H_2O(v)$ will benefit from the participation of the project Cryo and DLH in the AFWEX mission. Primary AFWEX objective is to resolve differences between $H_2O(v)$ sensors.**

Papers

- Diode Laser Hygrometer Instrument Paper (Diskin/Sachse/Podolske/Slate)
- Diode Laser Hygrometer Algorithm (Podolske/Diskin/Sachse)
- The large scale distribution of CH4 in the western Pacific: sources and transport from the Asian continent” (Bartlett et al.)
- “Multi-platform observation of the CO distribution during TRACE-P” (Pougatchev et al.)